

University of Georgia

Transplant yellow squash tolerance to Dacthal applied 2 d after transplant.

Trial ID: Veg-31-03 Study Dir.:
Location: Ponder farm Investigator: Stanley Culpepper

GENERAL TRIAL INFORMATION

Study Director: Stanley Culpepper **Title:** Ext. Weed Science
Affiliation: University of Georgia **Postal Code:** 31794
Investigator: Stanley Culpepper **Title:** Ext. Weed Science
Affiliation: University of Georgia **Postal Code:** 31794

Trial Status: completed **Initiation Date:** Apr-01-03 **Country:** U.S.A.
City: TyTy **State/Prov.:** Ga **Postal Code:** 31794
Conducted Under GLP (Y/N): N **Conducted Under GEP (Y/N):** N

Crop 1: CUUPE summer squas **Variety:** Enterprixe **Planting Date:** Apr-01-03
Planting Method: transplant **Rate:** 1 per foot **Depth:** 1 in
Row Spacing: 6 feet **Seed Bed:** bedded
Soil Temperature: 66 F **Soil Moisture:** drip

Plot Width, Unit: 6 FT **Plot Length, Unit:** 15 FT **Reps:** 4
Site Type: research station
Tillage Type: conventional **Study Design:** RANDOMIZED COMPLETE BLOCK

SOIL DESCRIPTION

Texture: sand **% OM:** 1.1 **% Sand:** 94 **% Silt:** 2 **% Clay:** 4
pH: 5.9 **Soil Name:** Tifton Sandy Loa

APPLICATION DESCRIPTION

	A	B	C	D	E	F
Application Date:	Apr-03-03					
Time of Day:	7 am					
Application Method:	broadcast					
Application Timing:	POT					
Applic. Placement:	overtop					
Air Temp., Unit:	64 F					
% Relative Humidity:	59					
Wind Velocity, Unit:	2 mph					
Dew Presence (Y/N):	n					
Soil Temp., Unit:	69 F					
Soil Moisture:	drip					
% Cloud Cover:	25					

CROP STAGE AT EACH APPLICATION

	A	B	C	D	E	F
Crop 1 CUUPE Stage:	POT					
Stage Scale:	2d transp					
Height, Unit:	4 inch					

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APPLICATION EQUIPMENT		A	B	C	D	E	F
Appl. Equipment:	backpack						
Operating Pressure:	22						
Nozzle Type:	flat fan						
Nozzle Size:	11002						
Nozzle Spacing, Unit:	18 inch						
Nozzles/Row:	4						
Boom Length, Unit:	4.5 feet						
Boom Height, Unit:	15 inch						
Ground Speed, Unit:	3 mph						
Carrier:	water						
Spray Volume, Unit:	14.8 GPA						
Propellant:	CO2						
Tank Mix (Y/N):	Y						

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Location: Ponder farm

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Weed Code	CUPPE	CUPPE	CUPPE	CUPPE	Harvest1 CUPPE	Harvest1 CUPPE	Harvest2 CUPPE	Harvest2 CUPPE
Crop Code	CUUPE	CUPPE	CUPPE	CUPPE	CUPPE	CUPPE	CUPPE	CUPPE
Rating Data Type	If disto	If disto	If disto	If distr	fruit	fruit	fruit	fruit
Rating Unit	percent	percent	percent	percent	number	wt/kg	number	wt/kg
Rating Date	Apr-21-03	May-03-03	May-11-03	May-26-03	May-12-03	May-12-03	May-14-03	May-14-03
Trt-Eval Interval	18 DA-A	30 DA-A	38 DA-A	53 DA-A	39 DA-A	39 DA-A	41 DA-A	41 DA-A
PRM Data Type								
Trt Treatment								
No. Name Rate Unit	1	2	3	4	5	6	7	8
1 None	0.0	0.0	0.0	0.0	10.3	1.7	11.7	1.9
2 Dacthal 4 lb/a	0.0	3.3	1.0	0.0	4.3	0.7	9.3	1.6
3 Dacthal 8 lb/a	0.0	9.3	6.3	4.0	8.3	1.3	9.0	1.6
LSD (P=.05)	0.00	3.89	2.72	1.31	14.92	2.28	4.90	1.06
Standard Deviation	0.00	1.72	1.20	0.58	6.58	1.01	2.16	0.47
CV	0.0	40.64	49.17	43.3	85.86	82.27	21.6	26.96
Bartlett's X2	0.0	3.898	0.151	0.0	3.192	2.816	0.323	1.221
P(Bartlett's X2)	.	0.048*	0.698	.	0.203	0.245	0.851	0.543

Means followed by same letter do not significantly differ (P=.05, Duncan's New MRT)

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Weed Code	Harvest3	Harvest3	Harvest4	Harvest4	Harvest5	Harvest5	Harvest6	Harvest6
Crop Code	CUPPE	CUPPE	CUPPE	CUPPE	CUPPE	CUPPE	CUPPE	CUPPE
Rating Data Type	fruit	fruit	fruit	fruit	fruit	fruit	fruit	fruit
Rating Unit	number	wt/kg	number	wt/kg	number	wt/kg	number	wt/kg
Rating Date	May-16-03	May-16-03	May-19-03	May-19-03	May-21-03	May-21-03	May-23-03	May-23-03
Trt-Eval Interval	43 DA-A	43 DA-A	46 DA-A	46 DA-A	48 DA-A	48 DA-A	50 DA-A	50 DA-A
PRM Data Type								
Trt Treatment								
Rate								
No. Name Rate Unit	9	10	11	12	13	14	15	16
1 None	6.7	1.0	2.3	0.4	0.0	0.0	4.7	0.7
2 Dacthal 4 lb/a	12.3	2.1	2.7	0.6	0.7	0.1	2.0	0.3
3 Dacthal 8 lb/a	9.0	1.4	1.7	0.3	0.0	0.0	3.0	0.6
LSD (P=.05)	6.34	1.08	2.56	0.33	1.51	0.23	6.18	0.65
Standard Deviation	2.80	0.48	1.13	0.15	0.67	0.10	2.73	0.29
CV	29.99	31.47	50.87	32.69	300.0	300.0	84.68	53.58
Bartlett's X2	0.483	0.48	2.735	1.067	0.0	0.0	0.305	0.922
P(Bartlett's X2)	0.487	0.787	0.255	0.587	.	.	0.859	0.631

Means followed by same letter do not significantly differ (P=.05, Duncan's New MRT)

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Weed Code	Harvest7	Harvest7	Harvest8	Harvest8	Harvest9	Harvest9	Harvet10	Harvet10
Crop Code	CUPPE	CUPPE	CUPPE	CUPPE	CUPPE	CUPPE	CUPPE	CUPPE
Rating Data Type	fruit	fruit	fruit	fruit	fruit	fruit	fruit	fruit
Rating Unit	number	wt/kg	number	wt/kg	number	wt/kg	number	wt/kg
Rating Date	May-26-03	May-26-03	May-30-03	May-30-03	Jun-03-03	Jun-03-03	Jun-05-03	Jun-05-03
Trt-Eval Interval	53 DA-A	53 DA-A	57 DA-A	57 DA-A	61 DA-A	61 DA-A	63 DA-A	63 DA-A
PRM Data Type								
Trt Treatment								
Rate								
No. Name Rate Unit	17	18	19	20	21	22	23	24
1 None	11.0	2.2	12.0	2.5	8.3	2.7	8.0	1.6
2 Dacthal 4 lb/a	11.3	2.0	5.7	1.3	13.7	4.7	5.0	1.3
3 Dacthal 8 lb/a	7.3	1.4	12.7	3.0	6.0	2.1	2.0	0.5
LSD (P=.05)	8.26	1.50	6.46	2.05	7.05	1.87	3.21	0.87
Standard Deviation	3.64	0.66	2.85	0.90	3.11	0.83	1.41	0.38
CV	36.85	35.89	28.17	40.29	33.31	26.07	28.28	34.26
Bartlett's X2	0.097	0.36	3.468	4.302	0.32	0.948	1.486	1.312
P(Bartlett's X2)	0.953	0.835	0.177	0.116	0.852	0.622	0.476	0.519

Means followed by same letter do not significantly differ (P=.05, Duncan's New MRT)

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Weed Code	TOTAL	TOTAL
Crop Code	CUPPE	CUPPE
Rating Data Type	fruit	fruit
Rating Unit	number	wt/kg
Rating Date	Sep-04-03	Sep-04-03
Trt-Eval Interval	154 DA-A	154 DA-A
PRM Data Type	T1	T2
Trt Treatment		
Rate		
No. Name Rate Unit	25	26
1 None	75.0	14.7
2 Dacthal 4 lb/a	67.0	14.6
3 Dacthal 8 lb/a	59.0	12.3
LSD (P=.05)	28.20	4.68
Standard Deviation	12.44	2.06
CV	18.57	14.88
Bartlett's X2	0.149	0.783
P(Bartlett's X2)	0.928	0.676

Means followed by same letter do not significantly differ (P=.05, Duncan's New MRT)

Column 25: T1 =

[5]+[7]+[9]+[11]+[13]+[15]+[17]+[19]+[21]+[23]

Column 26: T2 =

[6]+[8]+[10]+[12]+[14]+[16]+[18]+[20]+[22]+[24]

Trial Comments

GENERAL COMMENTS: Telone applied over trial area. Visual injury ratings were a measurement of leaf distortion as stunting was not noted.

OBJECTIVE: Why do we not have Dacthal labeled for over the top application to transplant squash?

VISUAL INJURY:

1) Leaf distortion was noted in Dacthal plots. However, distortion was minor and less than 10% throughout the season.

YIELD:

1) As always, individual harvest dates were highly variable. However, Dacthal treatments had no significant impacts except for Harvest 10 where the 8 lb rate treatment had a few number of squash harvested.

2) Total yield was less variable with CV's less than 19. Fruit number and weight were not impacted by Dacthal. There might be a slight trend for lower yields in the 8 lb/A treatment. However, 4 lb/A would be the X rate.

CONCLUSION:

1) Dacthal at 4 lb/A did not significantly injure Squash.